

City of Newport Beach

Coastal/Bay Water Quality Citizens Advisory Committee Minutes

Date: July 12, 2012

Time: 3:00 p.m.

Location: Fire Conference Room

1. Welcome/Self Introductions

Committee Members present:

Chairwoman/Mayor Nancy Gardner

Michael Henn, Council Member

Randy Seton

Dennis Baker

George Robertson

Tom Houston

Guests present:

Jack & Nancy Skinner, SPON

Doug Shibberu, Santa Ana Regional Water Quality Control Board

Staff present:

John Kappeler, Water Quality Manager

2. Approval of Previous Meeting's Minutes

The minutes from the June 14, 2012, meeting were approved.

3. Old Business

(a) Bay and Ocean Bacteriological Test Results

John Kappeler reviewed recent water quality test results within Newport Bay and along the ocean shoreline.

- Garnet Avenue hit may be attributed to dog owners not picking up after their dogs on the beach.
- **Randy Seton** asked what day of the week the County Health Department tests Newport Beach and was told it was Monday.

4. New Business

(a) Doug Shibberu, presented an update on algae levels in Newport Bay. (See attached PowerPoint Presentation.)

- Macroalgae in Lower Newport Bay (Balboa Island) might be attributed to several potential causes:
 1. Nutrient (nitrogen) supply from San Diego Creek
 2. Local storm water runoff
 3. Groundwater seepage
 4. Sediment re-suspension from dredge barges and local boat traffic
 5. Sediment deposition (large storm events)
- Groundwater is the largest source of dry weather loading.
- Overall the San Diego Creek flow rates have come down in dry weather.
- **Dennis Baker** asked for a list of the most likely reasons for algae growth at Balboa Island and was told: 1.) habitat, 2.) protection from currents; 3.) high salinity.
- **Randy Seton** asked if certain places should be monitored to find out if the algae blooms are something to be worried about or just "something that is just happening."

- **Dennis Baker** asked if future development at the Great Park would have an adverse impact and was assured that developers will be required to comply with the new Storm Water Permit and that no impact is anticipated.
- (b) **George Robertson**, from the Orange County Sanitation District gave an update on the monitoring that will take place before, during and after making repairs and maintenance to OCSD's ocean outfall. (See attached PowerPoint Presentation).
- There are two ocean outfalls. Shorter one terminates 1 mile offshore in 60 feet of water. Longer one terminates 4.5 miles in 200 feet of water.
 - Approximately 180 to 200 million gallons per day are treated.
 - Two gliders (from USC) will be operating 24/7 to identify plumes. Data is uploaded every 4-6 hours on the SCCOOS website at: <http://www.sccoos.org/projects/ocsd-diversion/>. (Interesting article in Newsweek recently on these types of gliders).
 - Surf Zone will be sampled daily from various locations between Bolsa Chica and Crystal Cove over the 34 day construction schedule. The monitoring will continue for 1-2 weeks after the construction has been completed.
 - **Jack Skinner** asked how often testing would be done at the 5 meter depth and was told once a week on a Monday or a Tuesday.
 - The maintenance project is scheduled to begin the day after Labor Day on September 4, 2012.

ACTION: **George Robertson** to send **Nancy Gardner** an email regarding the legal issues holding up the installation of a USC monitoring station on the Newport Pier. (SCCOOS currently has one on the Huntington Pier).

5. Public Comments on Non-Agenda Items

- **Dennis Baker** reported that he spoke with Bill Rich regarding the cleaning of the rack line and was told the crews only clean when it is laden with trash so as not to disturb the habitat frequently.
- **Dennis Baker** pointed out the damage done to his surf ski by a steel cable connecting two buoys between Bay Island and the Peninsula and asked why a steel cable was used instead of rope.

6. Topics for Future Agendas

- (a) Bacteriological Dry-Weather Runoff Gutter Study (Phase III)
- (b) Prop 84 ASBS Grant Program
- (c) Big Canyon Project
- (d) Rhine Channel Project Wrap Up
- (e) Balboa Island Seawall Update
- (f) Runoff Reduction Program – ET Controller Project Update
- (g) Senate Bill – SB 1447
- (h) IRWD report on NTS Systems

Set Next Meeting Date

The next meeting date was set for August 9, 2012, at 3 PM in the Fire Conference Room.

7. Adjournment

The meeting was adjourned at 4:50 pm.


Chairwoman / Nancy Gardner

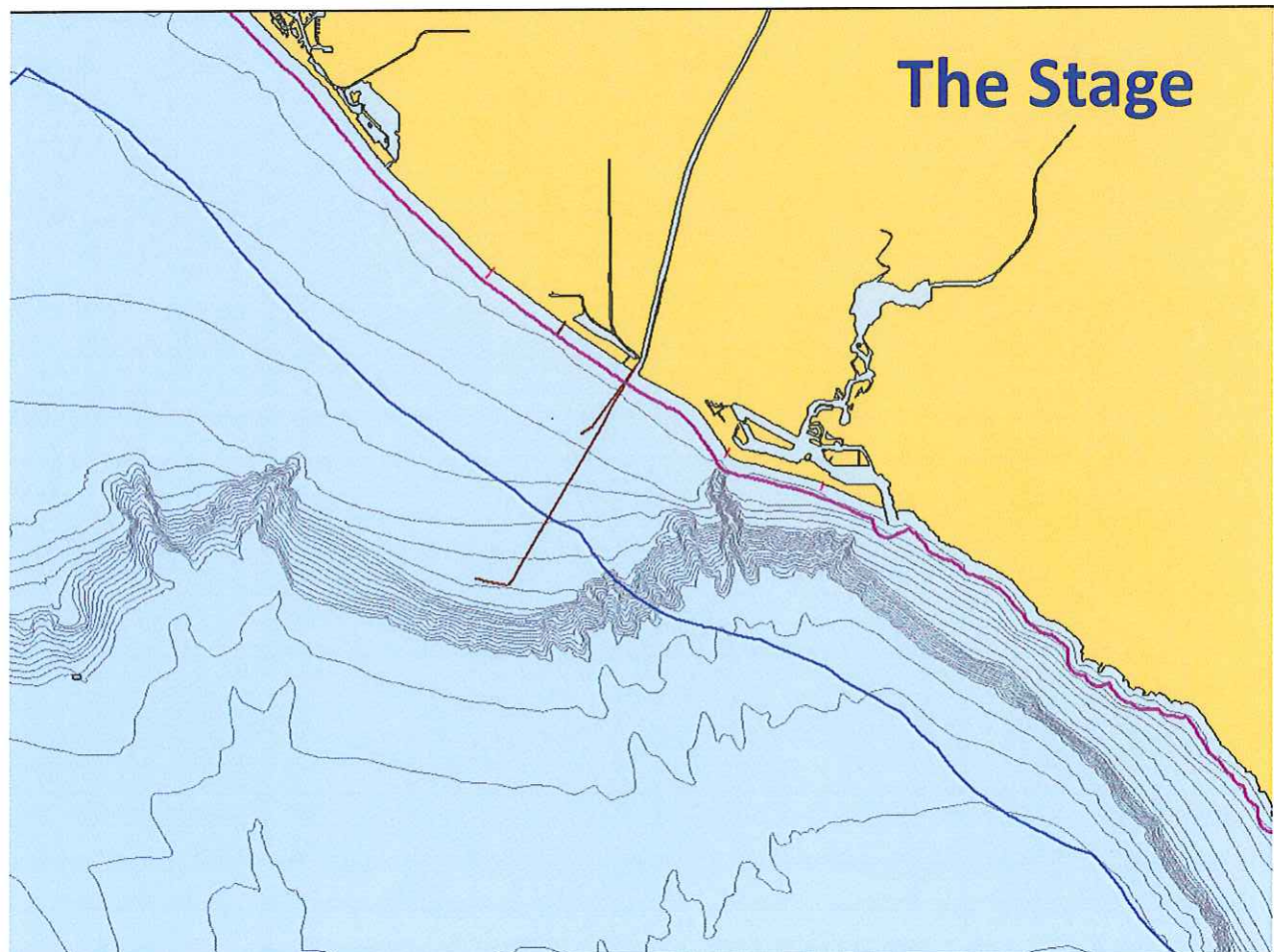
OCSD Receiving Water Monitoring

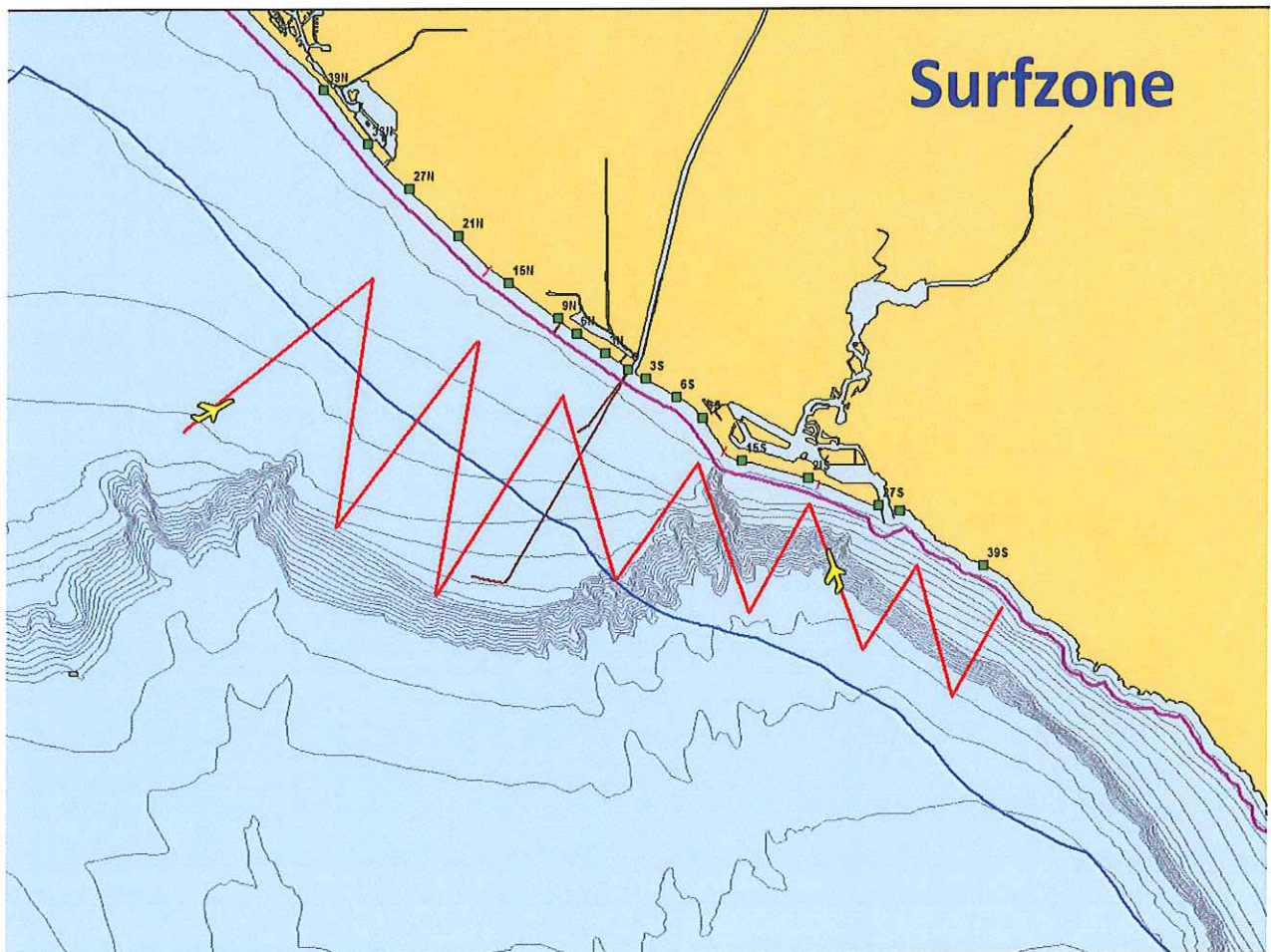
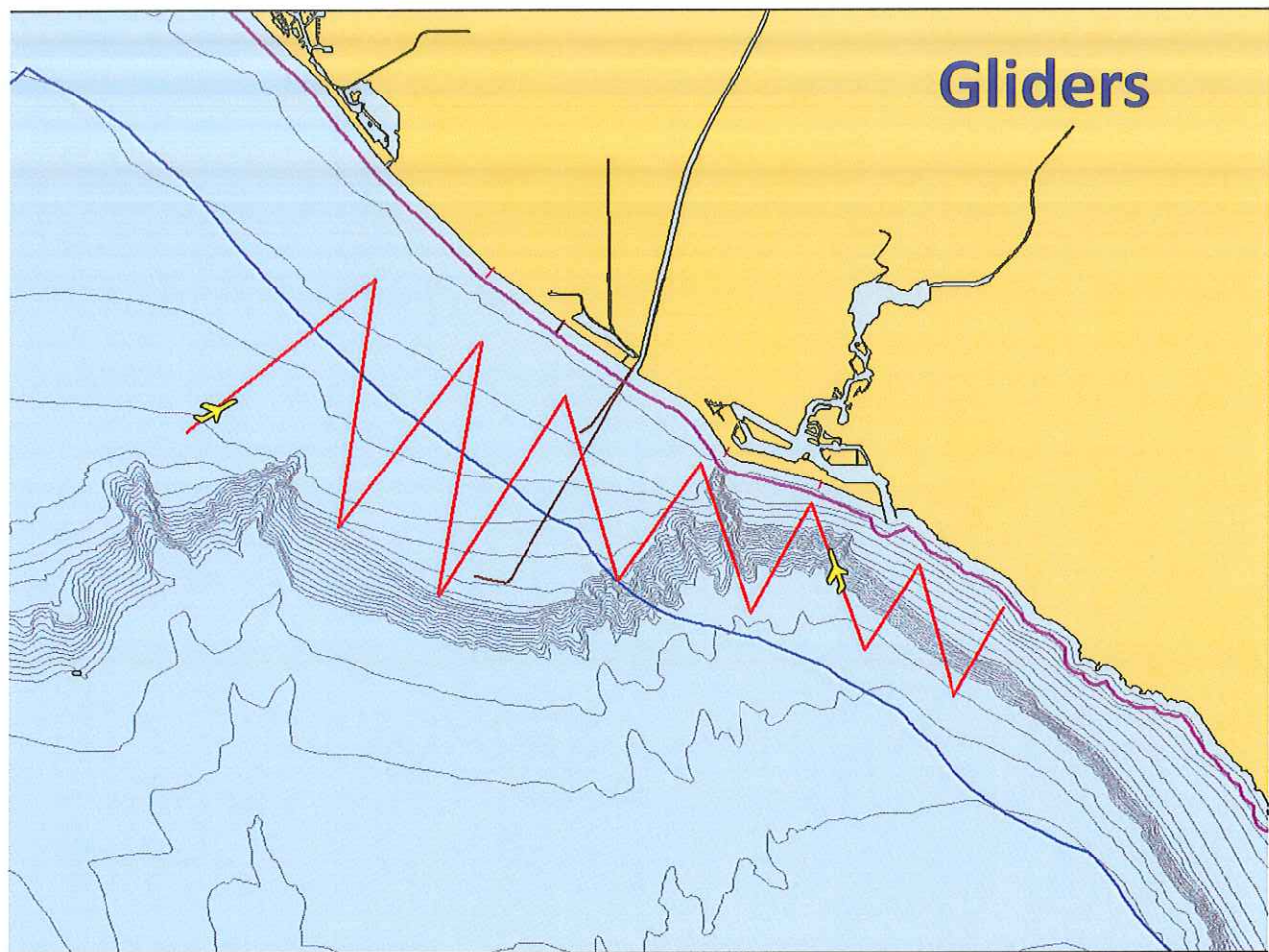
Areas of focus:

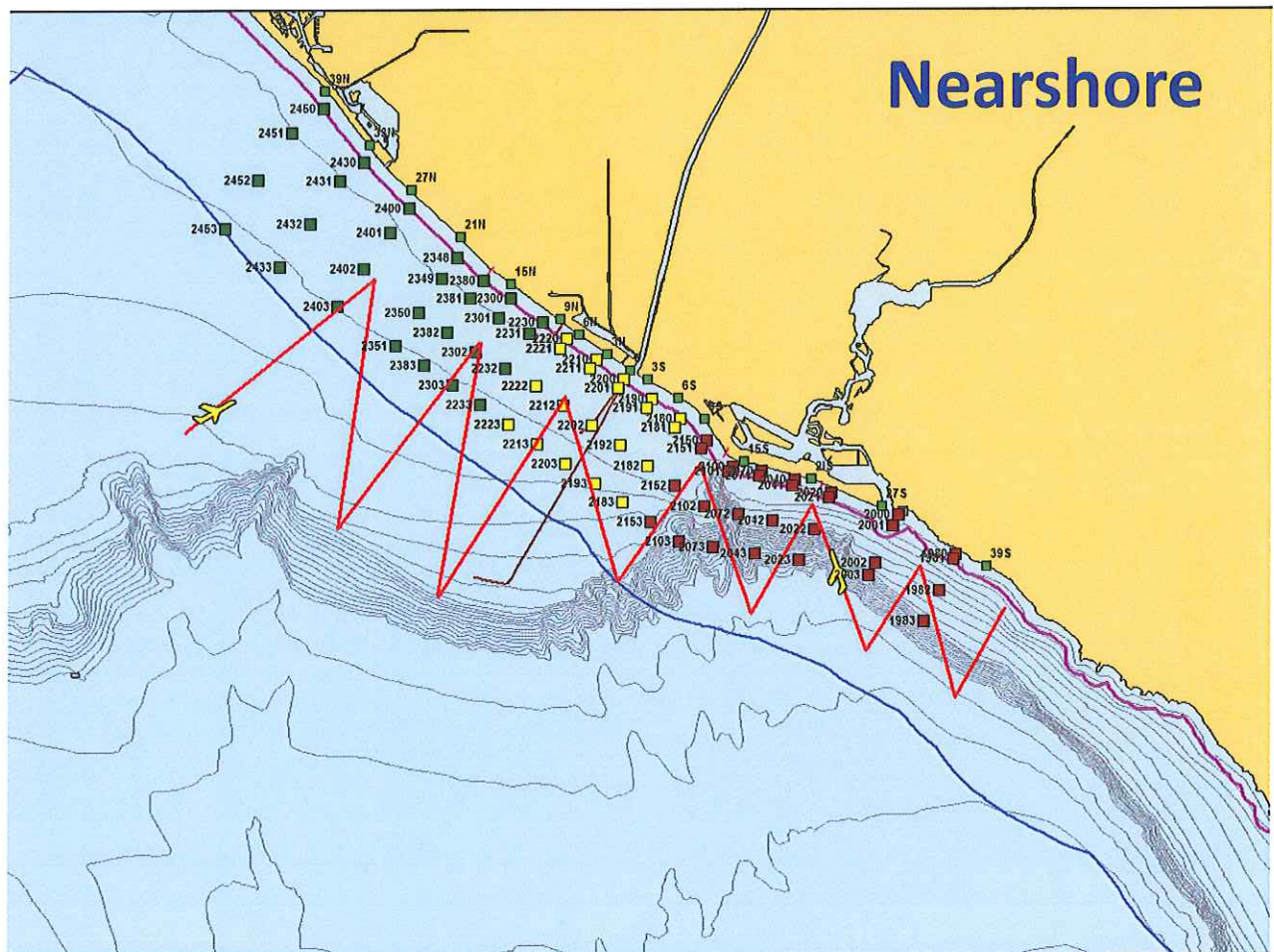
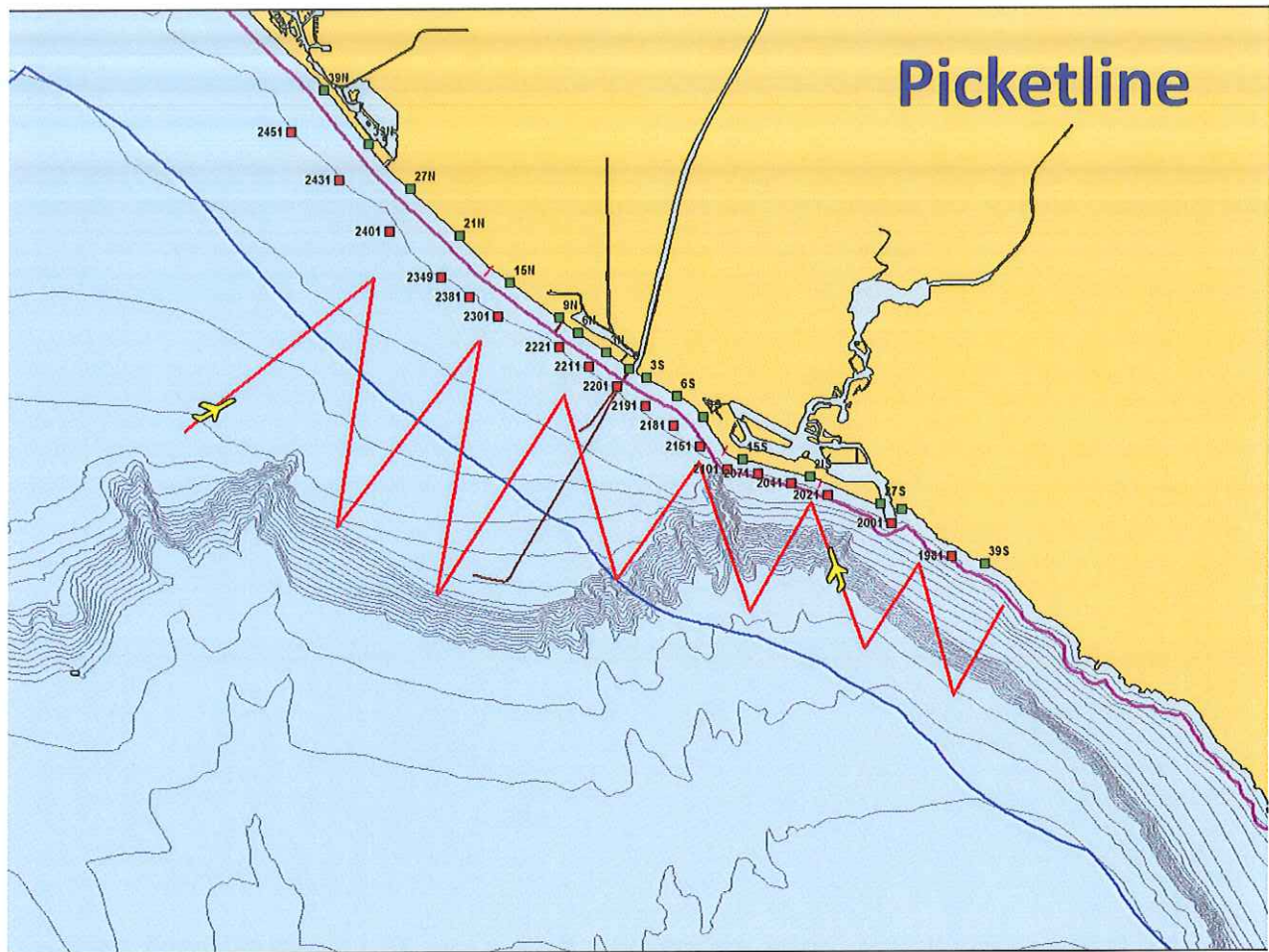
- **Human Health**
 - FIBs in nearshore and surfzone waters
- **Environmental Impacts**
 - Nutrients → Algal Blooms
 - Benthic Impacts

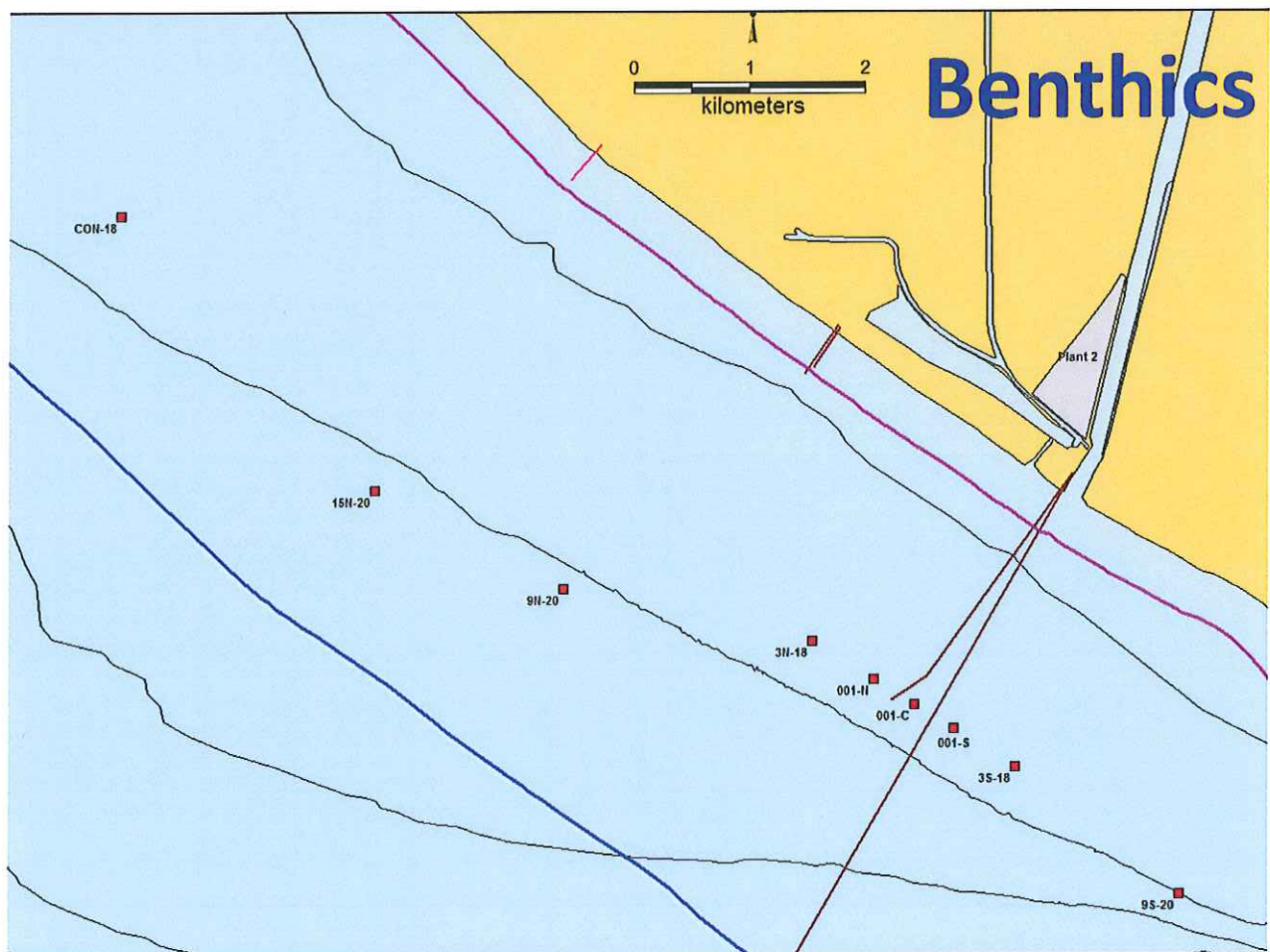
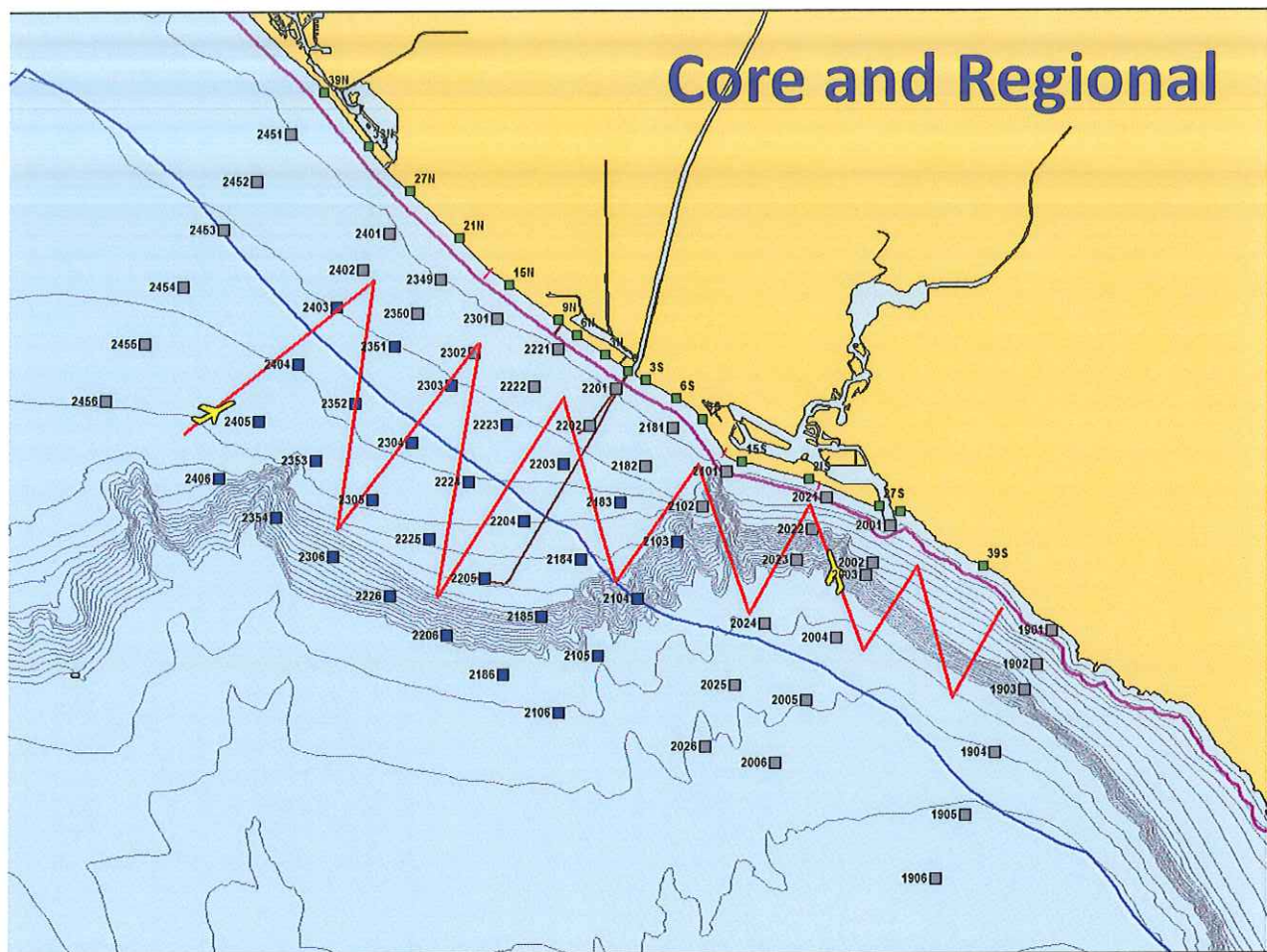
Using a layered approach

- “... ogres are like onions !” *Shrek (2001)*



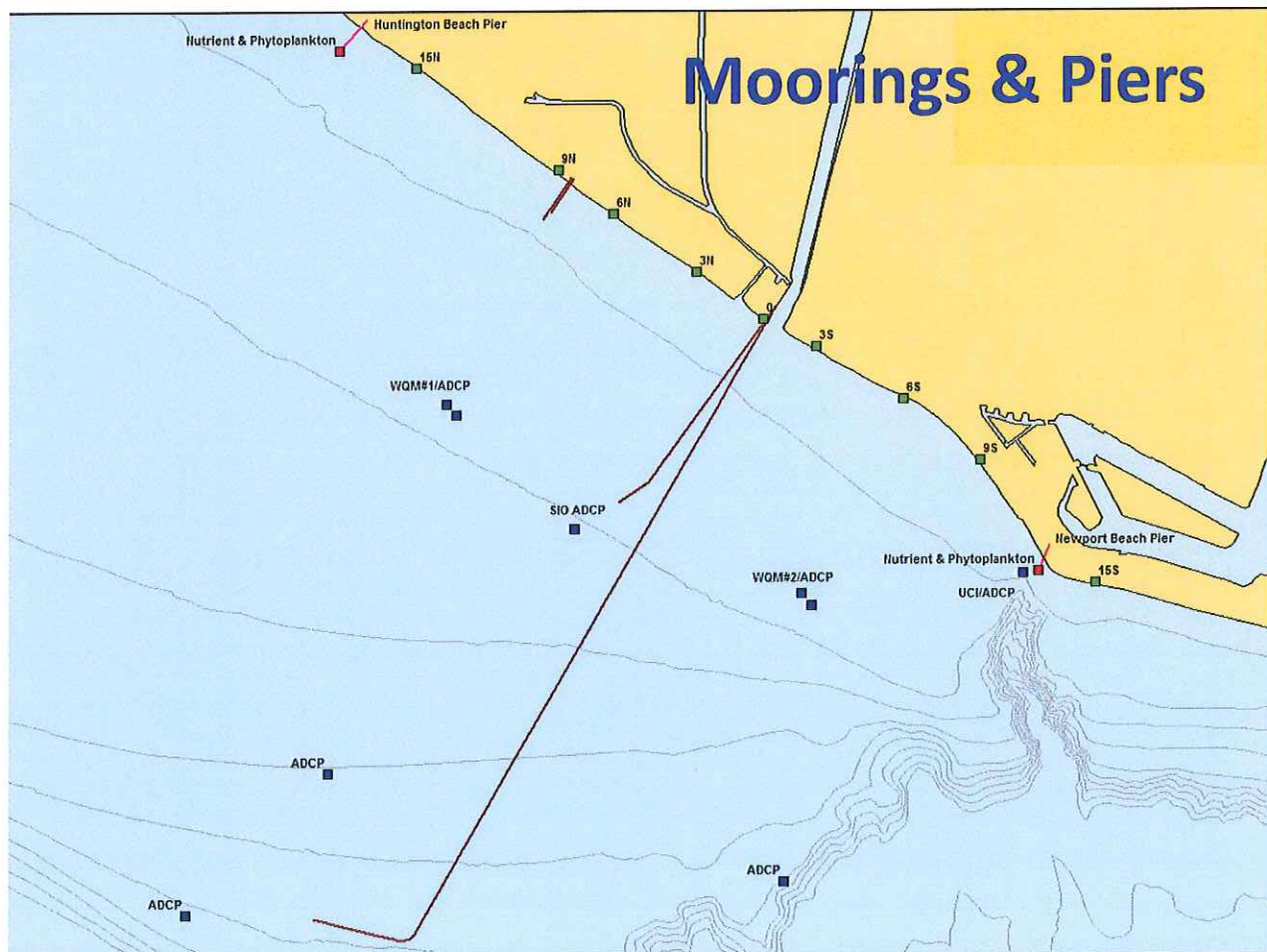


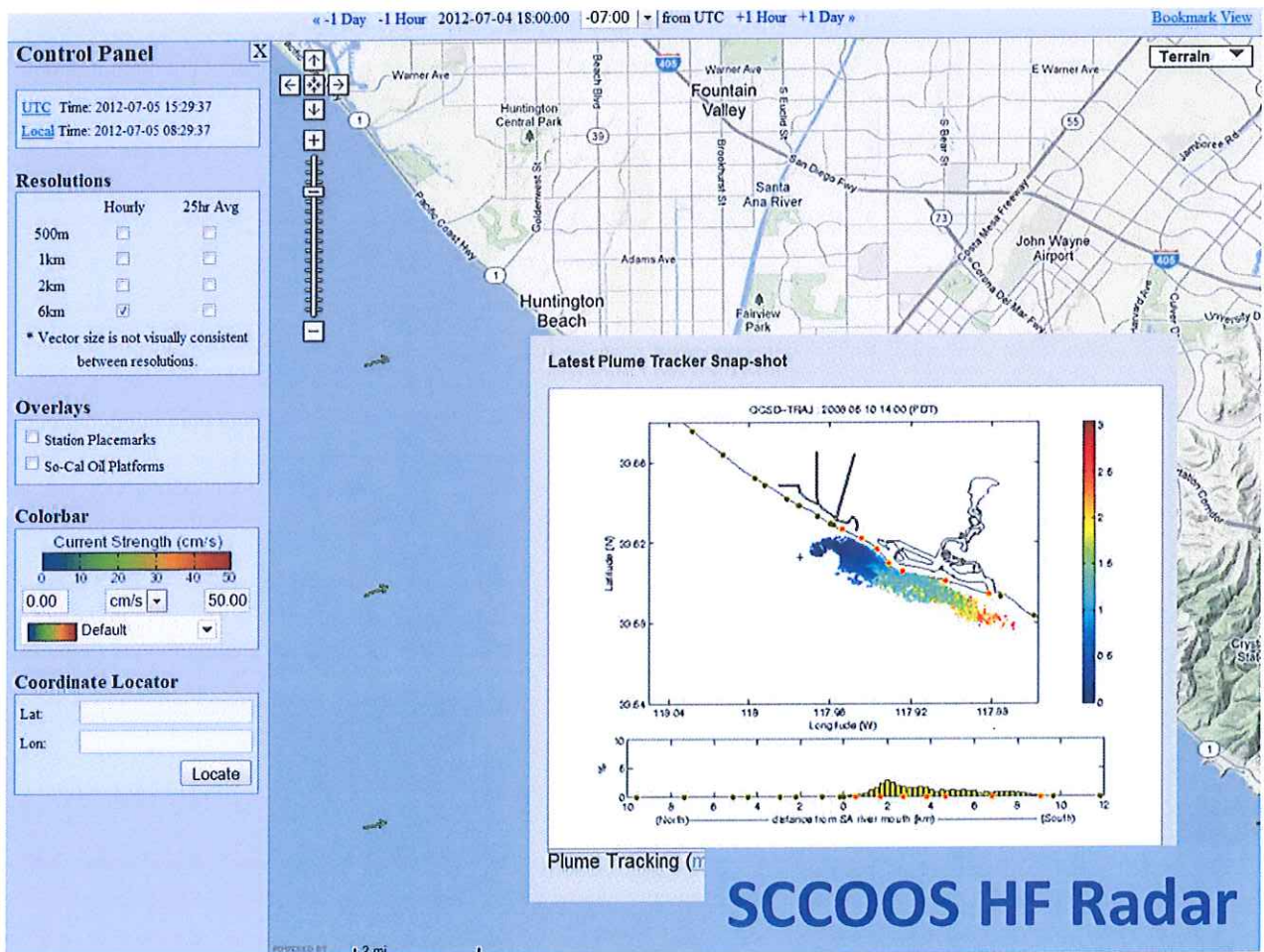




Additional Monitoring

- SCCOOS Telemetry Mooring (hourly)
 - Currents & temperature
- OCSD/UCI ADCPs
- SCCOOS HF Radar (hourly)
 - Surface currents
 - Particle tracking (1-3 days)
- SCCOOS Pier HAB program (weekly)
 - Expanded to include HB Pier
 - Nutrients & Phytoplankton
- SCCWRP Drifters







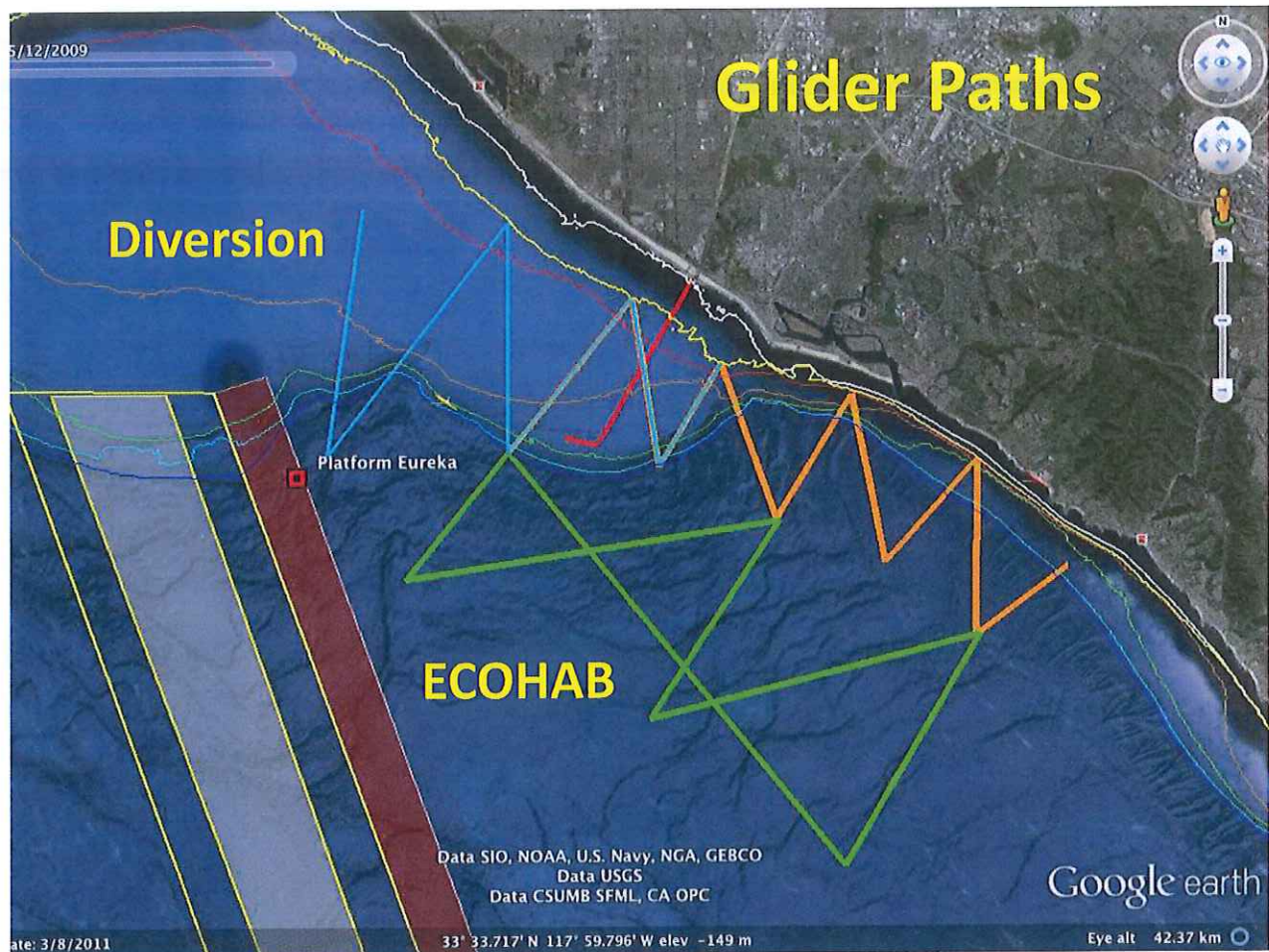
Modeling

- **ROMS**
 - 75 m resolution
 - Nowcasts
 - Predictive
 - ~6 hours
 - **CDIP Monitoring and Prediction System (MOP)**
 - Within surfzone transport



Allied Monitoring

- **ECOHAB**
 - Modified to included as part of San Pedro study area
 - OCSD to provide ≤ 5 boat days
 - **JPL**
 - Included in student satellite project
 - **MBARI**
 - Installing ESP mooring
 - OCSD to provide boat for deployment/recovery
 - **SCCWRP**
 - TBD → Nutrient cycling
-
- **UCSB**
 - Drifters → effluent dilution vs. CDOM



Data Access

- Uploaded upon availability to:
 - <http://www.sccoos.org/projects/ocsd-diversion/>



A topographic map showing a blue line (likely a river or stream) and a purple line (likely a boundary or road). The map is oriented with the blue line running diagonally from the top left to the bottom right. The purple line runs parallel to the blue line, slightly to its right. The background is a light gray with some green and blue shading indicating elevation and water features.

Questions?



The background of the slide is a map of a coastal region. A river or estuary flows from the top left towards the bottom right. A large, light blue plume is shown extending from the river into the ocean, representing a discharge. The map includes various land features, roads, and a coastline. The title 'OCSD Monitoring' is overlaid on the top right of the map.

OCSD Monitoring

- **Objectives:**
 - Monitor plume before, during and after discharge
 - Provide info to regulators and the public
- **Monitoring Elements**
 - Public Health Monitoring
 - Environmental Protection Monitoring
 - Predictive Modeling

Update on Newport Bay Nutrient TMDL and Macroalgae Blooms

Santa Ana Regional Water Quality Control Board

dshibberu@waterboards.ca.gov

951-782-7959

July 12, 2012

Outline

1. Balboa Island Macroalgal Bloom
2. Potential Causes
3. Comparison with Upper Newport Bay Macroalgae Biomass
4. Nutrient Sources
5. Nutrient TMDL Update

TMDL = Total Maximum Daily Load (Federal program mandated by the Clean Water Act to ensure achievement of water quality standards)

Macroalgae - Lower Newport Bay (Balboa Island)



February 2011
(Bloom continuing from November 2010)

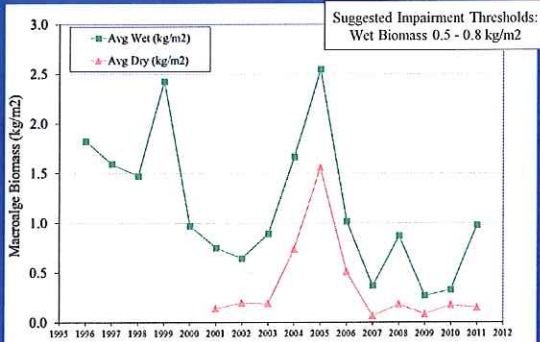


May 2012

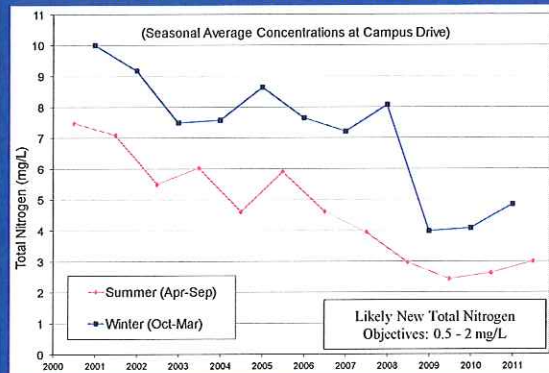
Potential Causes of Localized Blooms

- Nutrient supply from San Diego Creek
- Local stormwater runoff
- Groundwater seepage
- Sediment re-suspension from dredge barges and local boat traffic
- Sediment deposition (large storm events)

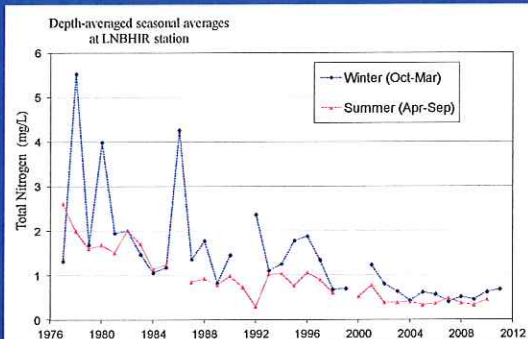
Macroalgae Trend - Upper Newport Bay



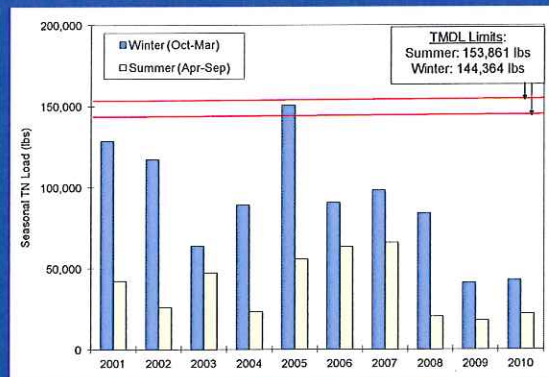
San Diego Creek Nitrogen Concentrations

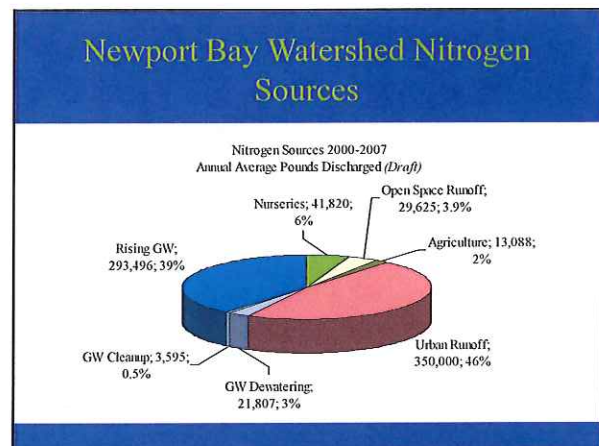
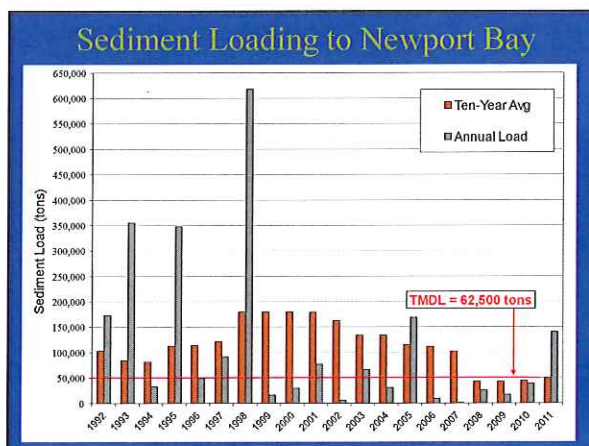
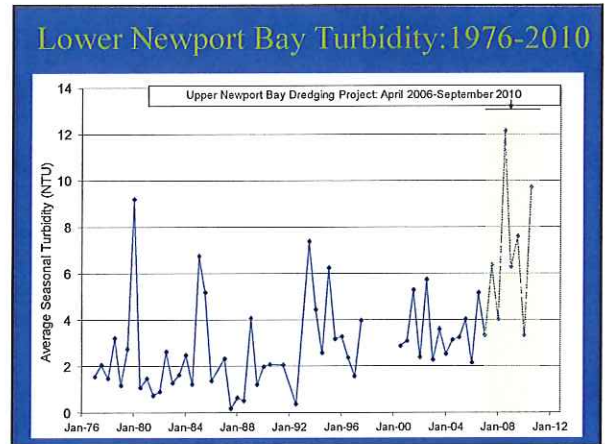
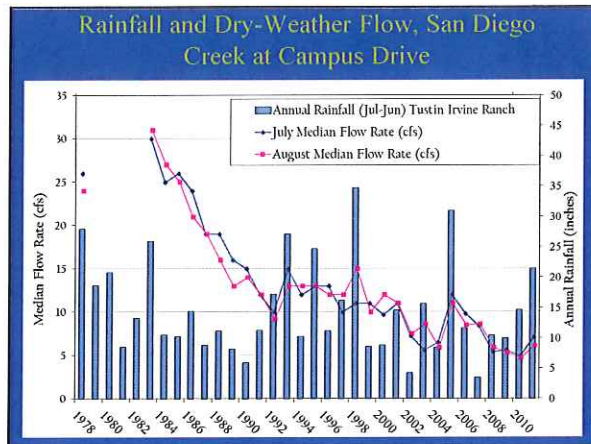


Nitrogen Concentrations - Lower Newport Bay (Harbor Island Reach)



Total Nitrogen Loads to Upper Newport Bay





Future Nutrient Load Reductions

Dry-Weather Diversion to OCSD for use in the
Groundwater Replenishment System

- Selenium-driven but will also reduce nitrogen
- Peters Canyon Wash
- Santa Ana Delhi Channel

New Stormwater Permit Implementation

- Low impact development (LID) for redevelopment projects

Continued Implementation of IRWD NTS

Continued Reduction in Sediment Loads